

2020286799

**PHILIP MORRIS U. S. A.**  
**INTER-OFFICE CORRESPONDENCE**  
**Richmond, Virginia**

**To:** R. P. Heretick

**Date:** October 14, 1992

**From:** S. Tafur

**Subject:** Paper Development Weekly Summary

**Wood Pulp Paper**

GC-MS results for the pyrolysis of wood and flax papers were analyzed for two particular mass fragments that are characteristic of xylan and lignin pyrolysis products. The wood paper yielded a much larger peak for the xylan product than the flax paper, as expected from the hemicellulose compositions of the pulps.

**Cigarette Paper Specifications Study**

Machinability trials were run at the Manufacturing Center using Kimberly-Clark cigarette papers ranging in tensile strength from about 0.05 to 0.13 kg/mm width. Three bobbins each of seven different types of paper were scheduled to be run on a Protos maker at 10,000 cigarettes per minute. As expected, some difficulty was encountered in running the papers of lower tensile strengths (.05 to .06 kg/mm). One box of 4,000 cigarettes was obtained for each successfully run bobbin for quality inspections. Samples of paper from each bobbin will be evaluated for tensile strength, elongation, chalk content, porosity, basis weight, and citrate level. Further evaluation of the results is in progress.

**Reduced Sidestream**

Cigarettes were made in Semiworks with a series of U. Maine papers made with different types of calcium carbonate with selected sizings and several KC calcium carbonate papers. Samples have been submitted to CTSD for analytical smoking and sidestream visibility testing is in progress. Subjective comparisons among the various calcium carbonates and between comparable U. Maine and KC papers are also in progress.

Kimberly-Clark low porosity, calcium carbonate base papers [grade 003-V2 (45 g/m<sup>2</sup>) and grade 078 (40 g/m<sup>2</sup>)] were sized with a series of monopotassium phosphate (MKP) and acid combinations to produce reduced pH solutions. These papers were designed as potential candidates for increased sidestream reduction over current papers being used on low sidestream models. Cigarettes were made in Semiworks, including one model with a high ET content in the filler. They will be submitted to CTSD for analytical smoking and sidestream visibility testing and subjective evaluations will be conducted.

2020286800

**PHILIP MORRIS U. S. A.**  
**INTER-OFFICE CORRESPONDENCE**  
**Richmond, Virginia**

**To:** R.P. Heretick

**Date:** October 21, 1992

**From:** S. Tafur

**Subject:** Paper Development Weekly Summary

**Wood Pulp Paper**

The GC-MS spectra obtained from the pyrolysis of wood and flax papers were examined for levels of products obtained from the pyrolysis of lignin. One peak that was several times larger for the wood paper than for the flax paper was identified as SO<sub>2</sub>. Samples of the wood and flax papers are being analyzed for levels of sulfur, chlorine, and nitrogen. Cigarettes made with the wood and flax papers will be tested for levels of sulfur-containing components in mainstream smoke utilizing methodologies with sulfur-specific detectors.

Papers consisting of blends of flax and wood have been requested from our paper suppliers for evaluation on cigarettes. Several samples ranging from 25% to 60% flax are being submitted by Kimberly-Clark and Ecusta.

**Cigarette Paper Specifications Studies**

A meeting was held with representatives from Purchasing, Quality Engineering, Technical Services and R&D to review recent results from the trial run of Kimberly-Clark paper in Bay 1 and smoke results with high chalk paper from DeMauduit. No problems were encountered in running the the K-C paper; however, the paper was analyzed as having higher than expected chalk levels.

A test conducted at the Manufacturing Center to determine differences between Ecusta and Kimberly-Clark papers for machinability and quality has been completed, and the results have been reported. Considerable cost savings might be realized in the reduction of freight costs and in expanding the fast-flow program by using more Kimberly-Clark cigarette paper at the Manufacturing Center.

During the month of August, Kimberly-Clark paper was run on two rows in Bay 1. Data collected during the test period were compared to data collected during the July control period, when Ecusta paper was being run in Bay 1. There were no significant differences between the two vendors for edge tear, tensile, or porosity. Calcium carbonate levels averaged 27% for 10-703 paper and 33% for 10-705 paper. Defect rates for cigarettes made with the Kimberly-Clark paper were significantly lower than control cigarettes made with Ecusta paper. Machine downtime for paper breaks was lower and less frequent for Kimberly-Clark paper than for Ecusta paper. Maker operators detected no difference between the Kimberly-Clark and the Ecusta paper in terms of how the papers ran. Kimberly-Clark paper

2020286801

was equal to Ecusta paper for machinability and quality during this test and Bay 1 management agreed that there are is no reason for Kimberly-Clark papers to be precluded from Bay 1.

### **Reduced Sidestream**

Handsheets at a basis weight of 45 g/m<sup>2</sup>, containing a mixed filler of 20% Multifex calcium carbonate and 10% commercial hydroxyapatite (one form of calcium phosphate) and sized with varying levels of monopotassium phosphate, were found to give sidestream reductions of 30-38% with reasonable static burn times. Requests have been submitted to prepare handsheets with higher levels of hydroxyapatite for evaluation.

Two papers of slightly different porosities and comparable calcium carbonate control papers were prepared this week at the University of Maine with the aqueous non-sol-gel material synthesized by the Chemical Research Division. The aqueous non-sol-gel material is a co-precipitated mixture of hydromagnesite and magnesium hydroxide.

Single port sidestream visibility data were also generated in preparation for the University of Maine trials with the aqueous non-sol-gel filler. Paper handsheets with Albacar, Multifex MM, or Microna 3 calcium carbonates in combination with the aqueous non-sol-gel material were designed to achieve about 70% sidestream reduction.

### **Banded Papers**

Preliminary evaluations were conducted on batches of bleached aspen wood pulp, eucalyptus wood pulp and fine cut cellulose fiber that had been subjected to steam-explosion treatment at Virginia Tech. Steam explosion thoroughly disintegrated the wood pulp sheets, but apparently did not cause appreciable defibrillation at 230 p.s.i. Also, it was seen that increasing residence time in the steam-explosion gun caused some discoloration. Additional evaluations of these samples will be conducted with a drainage tester more sensitive to subtle differences in fiber characteristics. It is anticipated that similar tests will be repeated at Virginia Tech following installation of an upgraded boiler capable of accommodating pressures in excess of 400 p.s.i.

During the work at Virginia Tech it was learned that a U.S. tobacco company is commercially using steam explosion, presumably for the treatment of stems. Inquiries have been initiated to learn more about this matter.

### **Support Activities**

The Fox Valley coater was tested with a different nozzle system and the pump from the pipe coater to apply ethanol on conventional paper. Tests for uniformity of application were conducted with solutions of CR2978 on regular and low sidestream papers. Samples from multiple places of the coating webs will be analyzed for both the new and old coater runs.

2020286802



**PHILIP MORRIS U. S. A.**  
**INTER-OFFICE CORRESPONDENCE**  
**Richmond, Virginia**

**To:** R.P. Heretick

**Date:** October 28, 1992

**From:** S. Tafur

**Subject:** Paper Development Weekly Summary

**Wood Pulp Paper**

Samples of wood pulp and flax papers are being analyzed for levels of sulfur, chlorine, and nitrogen. Control samples were run by Analytical Research to select an ion chromatography column suitable for S and Cl analyses; analyses of the test samples are in progress. The results for nitrogen analyses show a higher level of N in the flax paper than in any of the three wood pulp papers (a hardwood, a softwood, and a hardwood/softwood blend).

**Reduced Sidestream**

Sidestream visibility analyses were completed on a series of cigarettes made with U. Maine papers produced with different types of calcium carbonate and several KC Multifex MM calcium carbonate papers. Visibility reductions for papers with combination sizings of potassium citrate or succinate and MKP are about 50%. Substantial differences in 8-port static burn times are noted among the various calcium carbonates to offer a potential option for increased puff count. Subjective evaluation of comparable Multifex MM calcium carbonate papers made at the U. Maine or by Kimberly-Clark showed no preference for either paper with monopotassium phosphate as the additive. Higher reduction (55%) was achieved with a Multifex MM chalk paper of lower permeability (4 Coresta before sizing).

Handsheets prepared with two different types of fibrous calcium sulfate (U.S. Gypsum grades A-30 and H-45), each at 5 Coresta and sized with monopotassium phosphate, were submitted for preparation of handmade cigarettes. These handmade cigarettes will be used to evaluate sidestream visibility and ash characteristics.

**Banded Papers**

Analyses of propyl paraben as an indicator for Avicel were completed on samples of Grade 137-1 cigarette paper printed with three levels of Avicel in 6.5mm bands at target levels of 6.2%, 4.7%, and 3.0%. Each bobbin was sampled at the outside of the bobbin and at 50, 400, 800, 1200, 1600, and 2100 meters to determine variation of application level within bobbins. Avicel levels at the outside of the bobbins measured 6.3%, 4.1%, and 3.0%, respectively. Samples from the bobbin with a 6.2% target in the bands averaged 5.4% with the 50-meter sample being low (3.5%) and the next three being somewhat low at about 5.3%. Samples from the 4.7% target bobbin were very consistent, averaging 4.4%, as were the variability samples from the bobbin with a 3.0% target (averaging 2.8%). Larger sheets have also been received

2020286803

For both cigarette sets, the statistics agreed very well among all three data sets. The unit in CTSD has previously been used for selections of all the specification study cigarettes.

A 1% solution of CR-2978 in ethanol was applied to nonporous paper of conventional weight for Cigarette Development. The coating work was done on the old pipe coater pending analytical results from coating uniformity trials on the Fox Valley coater.

cc:    S. Baldwin        N. Gautam  
      G. Bokelman     B. Geiszler  
      M. Cruise        B. Goodman  
      B. Floyd

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for testing of variability in the bands across the web. Within-band permeability measurements are also in progress.

Laboratory procedures are under development for the evaluation of banded cigarette wrappers. Methods are under development for the determination of the paper permeability within the region of the band. Other methods will be developed for determining basis weight and uniformity within the banded region using the Ambertec Formation Tester scheduled to arrive next month. A method was also developed by the Analytical Research Division to determine the level of carboxymethylcellulose (CMC) in the powdered Avicel CI-611.

Sample sheets of banded papers were provided by Kimberly-Clark which showed significant improvement over previous papers in terms of wrinkling. The printed papers were moistened and re-dried to remove the wrinkles. There was no distortion or spreading of the bands. Propyl paraben tracer analyses will be obtained for both banded and unbanded regions.. Within-band permeability measurements are also in progress.

#### **Cast Leaf**

The potential of the steam-explosion gun at Virginia Tech to be used for the processing of tobacco materials was discussed with members of the Cast Leaf project. Work conducted previously at PM suggested that steam-explosion might be capable of releasing natural tobacco binder in a cost effective manner. It appears that the facility at Virginia Tech may be more appropriate and less costly for conducting a large scale cast leaf study than a pilot plant that had been tentatively scheduled at the Herty Corporation.

#### **Tipping Papers**

A meeting was held with representatives of Purchasing, Hermetite, and Thiele-Engdahl, our cork ink supplier, to finalize ink weight specifications for cork-on-white tippings printed with low silicate inks. The initial cork ink weight target had been set at  $3.6 \text{ g/m}^2$  in the cork zone for the low silicate inks, substantially lower than the  $5.1 \text{ g/m}^2$  target for some of our tippings with the previous inks. Based on several months of successful operating performance, the cork ink weight specification has been adjusted downward to  $3.4 \text{ g/m}^2$  for the low silicate inks.

Thiele-Engdahl discussed a new ink formula which is intended to address several PM concerns about the ink plasticizer, surface friction, and pigment cost. Purchasing Technical Services has submitted the proposed ink formulation to Materials Evaluation for review.

#### **Support Activities**

The automatic rod weight classifier recently transferred to Cigarette Technology was compared to an identical unit in CTSD. Two sets of cigarettes with very different weights were each run on our instrument and on the one in CTSD, and then again on our instrument.

2020286604

**PHILIP MORRIS U. S. A.**  
**INTER-OFFICE CORRESPONDENCE**  
**Richmond, Virginia**

**To:** R.P. Heretick

**Date:** October 28, 1992

**From:** S. Tafur

**Subject:** Paper Development Weekly Summary

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*Sent to  
Heretick*

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2020286805

- I *sample*  
 II *A sheets of banded papers were provided by Kimberly-Clark which showed significant improvement over previous papers in terms of wrinkling. The printed papers were moistened and redried to remove the wrinkles. There was no distortion or spreading of the bands.*

### Cast Leaf

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*Propyl parathion tracer analyses will be obtained for both banded and unbanded regions. Within-ban permeability measurements are also in progress.*

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A 1% solution of CR-2978 in ethanol was applied to nonporous paper of conventional weight for Cigarette Development. The coating work was done on the old pipe coater pending analytical results from coating uniformity trials on the Fox Valley coater.

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2020286606

**PHILIP MORRIS U. S. A.**  
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**Richmond, Virginia**

**To:** Dr. K. S. Houghton **Date:** October 14, 1992  
**From:** Sherry Baldwin  
**Subject:** Paper Technology Update for the Weeks of September 7 through October 5

**Wood Pulp Papers**

Analytical data from the pyrolysis of wood pulps and papers were reviewed with representatives of National Renewable Energy Laboratories. Based on prior experience in the pyrolysis of various biomass components, Dr. Robert Evans identified mass spectral peaks associated with the pyrolysis of xylans and lignins for further evaluation by Philip Morris workers. The mass spectral data generated to date comparing flax and wood pulp papers were reassessed to determine whether or not the differences observed are related to the pyrolytic products of these key components. Chemical analyses performed earlier on a variety of hardwood and softwood pulps and on flax pulps showed differences in the amount of xylans present in the wood pulps versus flax pulp. GC-MS results for the pyrolysis of wood and flax papers were analyzed for two particular mass fragments that are characteristic of xylan and lignin pyrolysis products. The wood paper yielded a much larger peak for the xylan product than the flax paper, as expected from the hemicellulose compositions of the pulps. Chemical analysis of wood pulp and flax pulp papers are in progress at the University of Maine.

Initial pyrolysis GC-mass spectral results of flax and wood pulp papers also indicate the presence of sulfur compounds in the pyrolyzate of wood pulp papers. These compounds were not detected in the pyrolyzate of flax papers. These compounds appear to arise from sulfonated lignin compounds present in the wood pulp. While this information is preliminary, these data indicate the need to investigate sulfur-free pulping processes. The first pulp samples have been prepared at the University of Maine by the soda-anthraquinone and soda-oxygen pulping processes. After subjecting these samples to a chlorine dioxide bleaching sequence, they will be shipped to Philip Morris for analysis.

The performance of wood pulp papers at Cabarrus has been monitored for the last three months. Because Kimberly-Clark uses only one source of softwood (that produced by K-C's Terrace Bay Mill), the evaluation of Kimberly-Clark's wood pulp papers on Cabarrus' J row was recommended as a follow-up study after earlier complaints about machining problems. Although the earlier problems were related to blend rather than paper, further investigation into the recurring factory complaints about wood pulp papers seemed warranted. As reported by Cabarrus QA personnel, the K-C wood pulp papers ran better than the Ecusta papers. Ecusta, however, after evaluating process monitoring data at the request of PM, made some process changes which appear to have improved the performance of their wood pulp papers.

2020286808

Ecusta has indicated that the changes made were relatively minor. The performance of wood pulp papers in our factories will continue to be monitored.

Two experimental wood pulp papers were made in a mill trial at Kimberly-Clark in late August. One sheet contains 100% hardwood as the fiber component; the other sheet, 100% softwood. Both papers were made with 30% calcium carbonate filler. Cigarettes were made for analytical and subjective smoking evaluations against flax and standard wood pulp paper controls. Descriptive Panel evaluations were completed for three Marlboro KS models to assess a 100% hardwood and a 100% softwood paper relative to the flax control paper. Both wood pulp models received negative attribute ratings relative to the flax control model. In a comparison of the two wood pulp models, no preference was found for either the hardwood or the softwood model.

### Cigarette Paper Specifications

Analytical evaluation was completed on samples of DeMauduit 10-705-A cigarette paper made to targets of 26% and 30% chalk. The papers were analyzed to contain 25.9% and 28.9% chalk, respectively. Marlboro KS cigarettes made with these papers were selected for weight, ventilation, and RTD and smoked analytically in CTSD and QA. In both cases, cigarettes with the higher chalk paper delivered 0.5mg less tar and had a slightly lower puff count average than cigarettes with lower chalk paper. The impact of calcium carbonate on tar delivery for full flavor brands seems to be well established. The standard deviation was smaller for the selected cigarettes at the 30% chalk level (.42 versus .60 at 26% chalk). This observation was made in earlier evaluations as well, but those numbers are not significantly different from each other based on the small sample population.

Machinability trials were run at the Manufacturing Center using Kimberly-Clark cigarette papers ranging in tensile strength from about 0.05 to 0.13 kg/mm width. Three bobbins each of seven different types of paper were scheduled to be run on a Protos maker at 10,000 cigarettes per minute. As expected, some difficulty was encountered in running the papers of lower tensile strengths (.05 to .06 kg/mm). One box of 4,000 cigarettes was obtained for each successfully run bobbin for quality inspections. Samples of paper from each bobbin will be evaluated for tensile strength, elongation, chalk content, porosity, basis weight, and citrate level. Further evaluation of the results is in progress.

A model relating the FTC tar delivery and puff count of full flavor, low tar, and ultra low tar cigarette designs to four paper parameters -- permeability, citrate level, calcium carbonate content, and basis weight -- was developed by the Applied Statistics group. The model will be used to develop paper specifications for a minimum number of papers to replace the six grades currently used.

## Banded Papers

(1) Laboratory procedures are under development for the evaluation of banded cigarette wrappers. Methods are under development for the determination of the paper permeability within the region of the band. Other methods will be developed for determining basis weight and uniformity within the banded region using the Ambertec Formation Tester scheduled to arrive next month. *A method was also developed by the Analytical Research Division to determine the level of carboxymethylcellulose (CMC) in the powder.*

For the measurement of within-band permeability, a modified Greiner instrument has been developed. A modified test clamp with a 4 mm by 16 mm test area was fabricated for the Greiner instrument to facilitate measuring the permeability within coated bands. In an initial assessment of the new clamp, the time for 50 ml of air to flow through a coated band was found to be about ten times as long as for the uncoated paper. Calibration of the instrument is in progress with a range of paper permeabilities. The precision of the measurements is also being determined. *Avicel CL-611.*

Samples of cigarette paper printed with three levels of Avicel were submitted for analysis of propyl paraben to determine the uniformity of application level within bobbins. Avicel was printed on Grade 137-1 cigarette paper in 6.5mm bands at levels of 6.2%, 4.7%, and 3.0%. Each bobbin was sampled at 50, 400, 800, 1200, 1600, and 2100 meters. Within-band permeability measurements will be obtained on these samples, as well, once the new method has been validated.

Further analytical needs for banded papers were reviewed with the Analytical Research Division. A series of paper samples with different base paper permeability and different application levels of Avicel were provided for initial evaluations.

Based on the evaluation of cigarette prototypes prepared with banded papers with different application levels of Avicel, it appears that some control of the burn rate in the banded region can be achieved by varying the application level in the band. Only a limited number of prototypes have been prepared, so it should be noted that the process needs considerable refinement. The development work in this area is proceeding.

Batches of bleached aspen wood pulp, eucalyptus wood pulp and fine cut cellulose fiber were subjected to steam-explosion treatment at Virginia Tech. The conditions used were 200° C, 230 p.s.i., and 2.5 minutes residence time. A batch of aspen was also processed at a longer residence time. The suitability of these materials for use on the moving orifice device will be evaluated this week. For now residence time can be varied, but 230 p.s.i. is the maximum feasible boiler pressure for the steam-explosion gun. In the next several months an upgraded boiler will be installed at Virginia Tech which should accommodate pressures in excess of 400 p.s.i.

2020286810



## Reduced Sidestream

### Calcium Carbonate Papers

Cigarettes were made in Semiworks with papers coated with potassium phosphate solutions buffered to a pH of 3. Cigarettes were also prepared from papers having a permeability of about four Coresta before coating and a 40 g/m<sup>2</sup> basis weight for the base sheet. The objective of these paper modifications is to improve sidestream reduction compared to those used for recent consumer research.

### Magnesium Carbonate Papers

#### Aqueous non-sol-gel

Papers will be produced at the University of Maine next week utilizing the fifty pounds of aqueous non-sol-gel material prepared by the Chemical Research Division. The papers to be prepared will have a basis weight of 45 g/m<sup>2</sup>, a filler composition of 15% of the hydromagnesite/brucite co-precipitated material along with 15% Multifex MM as a co-filler. The target porosity of one sheet will be 5 Coresta units. That of the second sheet will be 8 Coresta units. Control papers made with Multifex mm chalk will also be prepared with matching porosities as well as basis weight and total filler loading. A procedure for determination of calcium and magnesium in paper utilizing a dual EDTA titration will be used to monitor the filler levels as the papers are prepared.

SDB/cbw

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	T. Callahan	B. Geiszler	K. Newman
	R. Cox	B. Goodman	J. Seeman
	R. Comes	H. Grubbs	H. Spielberg
	M. Cruise	B. Handy	S. Tafur
	C. Ellis	R. Heretick	J. Whidby
	B. Fenner	C. Lilly	

2020286811

6/24/92

Paper Mfg

Low SS

A. Irim Va Slings

100 mm .77 .03  
.84 n=3 .02

MEP Jon Fletcher

Blend + Flavor

20% RSA 45g basis wt 7.5

⊗ KH Citrate Citric acid sizing

Sue: Lounge. SST

Aqueous Cal-gel

4 Requests Handshirts  
available.

8 cigs for

Synthetic magnesite. 90 stock 180 stock

90 stock 255 sec

Still slow draining

Vanillin release agent made 5% + 10%  
level

Geoff Chan is taking care of NMR  
450 temp response  
SS aroma evaluation.

2020286812

$\beta$  cyclodextrins; say a  
lost much during paper making  
little in the paper.

~~Chumick~~ Vanillin analogs to mimic the HCA  
release mechanism.

E. Tomorrow Banded paper.

- M.O. Device

July 13 w/ Group

F. Tipping Printing w/ solvent based ink.

C. P. Liner printed acceptably

1. no/floor analyses  
SW/F

Analogues to

TCMS pyrolyzing preps

Higher gas release Acetic acid & other  
acidic compounds

After shutdown week July 20

2020286813

6/25 Sidestream Irritation

Meeting w/ Seel

① Model System Screening

~~Se~~

Analytical work in Europe:

Subjectives in Europe too.

Don + J. Charles

Chem Research Reactor work is progressing

Design of Materials

OK

SS Components

Sidestream Chamber a duplication

~~XXXX~~ Product Development Work

⊗ Maj Carbonate ⊗ Scale \$100,000

Neuchatel : Product Development

3rd qtr : Make 50 lbs

Focus Groups

6/25/91

⊗

Double-cut Cellulose ⊗

from Agave

Hopewell

for refining Trials for moving  
refining device

2020286814

6/26/92 Jim's STAFF mtg

Mike Roan performance mgmt program

WED 2:00 PM

SEVILLE - free standing mental to be discount

Tue + Wed; Product mktg.

\* MUL ; Campbell wanted 4th Qtr Natl intro but delayed till

Mailbox adventure team to 3x10<sup>9</sup> cigs promote. next year

RED XPRESS

5 PACK - AUGUST

Va Slims new graphics complete Logo type to change.

ULTS changes to be less.

Metalize polypropylene for wrap ? Environmental concerns.

Not August 6

6/29/92

Bill's comments only to try the papers on hand  
from the vendors not to <sup>make</sup> handout Pick out; Some  
Review pulp analyses + design; ⊗ Selections made  
Nemicellulose composition: 8% Softwoods

→  
> 50% Hardwood

⊗ Pulps already  
made

Bobs to review

2020286815

Pete

Salary Continuation - based on years of service

36 weeks will move him into next year's deep Actna

if retired as long

Dec 1st convert

but have to take lump sum payment  
could convert

DPS would not get it this year

by adding salary continuation

Age 65 w/ 15 yrs service

Don't even to do package far ahead of time

won

⊗ If he takes a lump sum payment

⊗ he can keep as of Dec 1st want lump

can

⊗ Retires Dec 1 w/ lump sum payment

get ⊗ Actna + DPS

⊗ Later Will there be any diff in lump sum  
more taxes tax refund

2020286816

7/1/92

Low SS VS POL / Consumer Testing only  
Jetema

Low Sidestream

Circumference 24.0 / 24.8

Subjective Deficit plans

King Size - No Sidestream odor or decrease  
but still w

3rd wk of August for 1:1 focus group

No POL's 24.8

Deficit on 23 ~ that on 24.8

24/83 why do 24.8

Test benefits on model 24.8 to 24.0

very close to

24.8 Ambrosia II models were equivalent

New flavor + VSlims blends.

Not happy

Issue

1. Paper (PC)

2. Flavor

3. Level 2978

Am't delivered to low SS

What vis level is necessary

42 g/m<sup>2</sup> paper oed

2020286817

7/7/92 Richmond Panel

25g

41g

52g paper

CR 2978

CR 2978

100  $\mu$  + AT 150

Subliminal

11  $\mu$ s / cigt on LSS

2 papers 42 + 52g w/ Va Slims Filler  
+ AC ?

Control Mild 300 42 is better

42g - Hard to draw than 52

more pl. throat irritation

42g little tobacco taste

5  $\geq$  harsher, shatter

54% reduction

		537	42
Control	Tar 8.8	8.3	8.5
	PC 10.2	8.7	8.9

1 puff less than control  
more

42 preferred over

Howard 42 better mouth coating

42 closer / ha

2020286818



Control most consistent  
not as full

42 closest ; low impact

52 harsher

42 little tobacco taste

paper taste chalky

42 closer less tobacco taste

42 dryer chalky

52 has

42 better than 52

HN + 50

- 42's are 50's line 20

dryer harsher

42 preferred over 52

42 w/ no subliminal liquid

100 to 200 2V + 2V

w/ 300-400 lbs no

Subliminal level - sl. sweet + Saliva  
sl. Throat harsher

150 Vanilla aroma - all per models

2020286819

. 2 level      Sienna    ad pack  
conventional    + 2ss

mask    or    off set

8:30

h      h    h    D

N    N    anti      help  
                                 al    fw

Tom      -    Don't think  
                                 SS pleasant

Barber

N1 →

N3 + N4

handmade scale

for

4.5 subjectives

SS panel

N2 vs 4/g -

Corista difference

⊗ N2 slower burning

Mark, Sue, Gordon

MATRIX ;

Study N

V3 + V5

models

2 Chalk

2 phosphora

Permitt

8  
/ 10  
- 12  
0

Recoated

4

C<sub>0</sub> + C<sub>1</sub> V<sub>1</sub> C<sub>2</sub> V<sub>2</sub>

8 vs 10°

2020286820

Processing going to Betty this morning

bag Wed.

reduction

10-0624 paper bag used

uniformity

Final I.P. data

Final data for  
D. Paine

Citrate / Citric Acid

SRT

8.9 min

below

captured organic  
materials

showed

low MW HAc

low MW HAc

device

area in each chromatogram

D.B. Mass

CGA

our WP

H<sub>2</sub>O

at column transition

main peak

Flare

more volatile

physically decent product

best work

CGA

100 mg app  
7% O<sub>2</sub>

2020286821

Filter + (1)  
Flavor

→ P.C.

N2 → N3 from

Na Silica

(2) modelling

Complex Modeling

July 14

Op Mtg

Jack to Dick

Gloria

PDM Paper Festivity - memo next wk

Gordon

Rea

Chalk

K3 Citrus

Citric Acid

Longer SBT

8.8

DICK :

2020286822

Cliff  
about  
KAP  
patent

Citric  
CA  
+ Euryth

Houghton Onty  
29th New product steering Comm

David B Suter

Darral

Good

Houghton

Renter

New Product Bus. Plan

Review feasibility  
Concept review

Cross Funct. teams

Proj Teams: Process - Concept study

Production Request

On-line system? on a MAC  
meeting monthly

Dangok

29th OMC meeting Decision  
Op. Strategy

Priorities Renter + Hankler

Conduct To be culture

Report card on  
proceed w/

Commitments → microstructural w/ customer focus

Base - MACRO structure

Diane O. + L. Wexler facilitate Base work

OMC Minutes to Campbell

BANE

Consultants + cultural change

strategic review

Duncan out

Macro issues by BANC lot  
ident

2020286823

Will there  
more

Juanita Brown      Wexler + O'Hagen

July 15 + Aug 20 next meetings

micro cultural change

How successful has sales reorganization

Decision making has moved down  
+ authority

More Accountability down into organization.

Length of time      How many more competitors  
will be

① Further head count reduction in S3  
Neuchatel + I

John Bane Interviewed NY      ② Entitlement → Earning

Operations      March April

lack of teamwork

info / Decisions not timely      quality of decision

Planning poor      + speed of decision making

Teamwork      Order

When headcount reductions

Culture + restructuring

Contracting PM USA

My Services Bill Mow

Knowledge

Better quicker decision

faster + more  
proactive

Structure Culture

2020286824

312 When 4100 in operation.  
by end of yr

Re-evaluation on issues  
outstanding more activities.

It is possible. There is no plan for further reduction  
but it is a possibility if it meets objectives.

150 years left + 150 openings existed  
competencies + how it relate to their  
Performance mgmt. review. Success in plan. PM USA  
Boring Case.

How they accomplished things - would give  
me a subjective evaluation.

mtg.  
Jeff : Bar hand count

2020286825

7/8/92

Richmond Panel

LSS

53 g/m<sup>2</sup>

47 g/m<sup>2</sup> paper w/ Vanillin hand

\* Comments:

SS aroma pleasing

C LSS w/o flavor astingent

w/ 150 smoother, sweet note

" + 100 less dry

Blank smooth C, harsher

rod aroma

(\*) no dif between blank and test

C dry, astesting; thin <sup>m coating</sup>

T smooth, sweeter, <sup>not</sup> sl flower

saliv

both sl throat harsher

Subliminal

2020286826



7/8/92 Low SS - OK Charcoal ⊗ filter

Lack of flux Miles : Filter design  
allow material to age.

52 to 42 g/m<sup>2</sup> run this week & evaluate  
next week. Combiner in Louisville

Export a charcoal filter to Japan ... Combined  
10-20 g/1000

Ty - Tobacco Needs ;

KH meeting : review with group before mon.  
FRIDAY 10:00 AM have questions ready Monday.

Miles will continue acquisition strategy ⊗

Headcount is not the objective.

Operational Plans later.  
Reviewed objectives.

KH R4 Cross-functional teams are  
a consequence.

Miscommunication of expectations.

Campbell had Canada & Australia Operations.

BOTH MATHE - PRODUCT DEV PROCESS

2020286827



Filters

COMBINERS etc

CONV LSS

paper

CiA

Ceramic tube

LSS program  
development

- if ⊕ consumer evaluation

2 step paper in house

N2  
N3

Machine made only get some

Judy - tipping

Paper Technology mtry

→ Charcoal OK for models

Va Slims

#4

#2

Marlboro filter

Aftercut #2 - composition =

Gordon - Filter flavor work : Screening of filter

Injection Technique.

Va Slims

Chem Research

Scale-up of Aqueous <sup>non</sup> Sal-gel

Scale-up in line

50 lbs

Contract awaiting - Com

→ Still optimizing

2020286829

⊗⊗⊗ Aqueous Sal-gel - Drainage testing  
major optimization



Base ppt

Drainage:

Powder 6-8 Coresta

9:00 AM

JOHN - ANALYTICAL RESULTS on Rhomboid

@@

SBT

Final tests on 8-port Coresta - out in early  
Bringing up 8 port, August.

E. Project Tomorrow

Nerby - 20th → Aug 3

Doubly-cut cellulose Rocky Foster

Moving Office 2-3 g/m<sup>2</sup> w/ Avial  
w/ CME ~ 2%

F. Tipping

1. Coal Drop-off

lip ⊗ Lacquer on skirt

Machinability testing

+ gluing - 014 ~~20~~ Robbins

2. H<sub>2</sub>O-based

lip release - Cisto made last  
week

Lip Release Panel Test by @@  
Nevin's panel

2020286830

⊗ WOOD PUMP

Flax is more variable than WP by most analyses.

J. Lyons-Hart - Evolved Gas Analyses.  
EGA

A lot of  $\text{CH}_4$  in condensate  
7.5%  $\text{O}_2$  in  $\text{N}_2$

Slight differences in WP vs FP under  
controlled combustion

TC-MS - WP vs FP  
Low MW Acid - HAc

JP - WP  
Flavor analyses  
Descriptors all  
Sterling Cigs calcite

Papers from Cigs made last fall - Marlboro  
Cigs

M.Lts

H. Paper Specs →

2. PDM Paper Results - Eric back next  
week

May new.

2020286831

Review Paper + Low SS Meeting

7/9/92

10  
135

Evaluate Ambrosia Paper

MCP results

N6 - few Charcoal flakes

⊗ ⊗

Subjectively close

⊗ ⊗

Blend tobacco taste

60 g paper there was some  
blend work

MAINSTREAM : effect

⊗

Waves removed.  
Ment Ultima.

⊗

⊗

2020286832

STAFF MTG

7/10/92

Sept 1 target

- Marlboro Blend Change - need POL data

12 - 13 % E T

mid July - off shore changes

Tow change

POL's to go out end of July

↳ what change

- Ambrosia (models going out)

- May use flicks to evaluate the concept

Evaluate on 42 + 52 g/m<sup>2</sup>

also look at 2 steps

look at possible alternatives

- POL's end of July - As scheduled;

lotus - status

Chesterfield Industrial Park  
Combining capability will be

- American Filtrona

Joe Griffin - Floor coverings are done  
mtg. Am Filtrona Wed 7/15

- RX - wide mtg - Cross functional team 9/15

Packaging issues to be resolved.

- Houghton mtg

Strategic

Presentations at 11:00

- 93 Operational Plans - what format?

OSHA

in MON & Tues

2020286833

Emergency #1's ON PHONES <sup>5000</sup>  
⊗ JOB SAFE PROCEDURES IN LABORATORY  
CHEMICALS LIST for lab

Sample Staging  
8 PORT instability Barbers to check  
WADE MOKARRE WADE

Barbers to check end of 4th gr

Physical removal justification

2/15

DICK

8 port into other lab

port x port profiles

Robotic + manual  
TPM + H<sub>2</sub>O

Eusan Hutchesson - where will they be

Mark - Cruise - Review

DICK JONES 3:30 PM

⊗ Teams →

GORDON - July 20 - 24 vacation  
Bill to do weekly

3:30 Lab walk through

2020286834



Jack Stimler A  $\rightarrow$  I

Detailed plan

Navin - cigs to be made next week  
propyl paraben method

Jeff

Pol's + question  
time frame

Bill

WP papers

KC - making mill

add to agenda.

CS data back on MLTs

Ultra Lts regression

Part by part

TPM

nic + H<sub>2</sub>O;

Final report electronically

TPM: electronically

2020286835

Paper:

Residual ash

Same basis wt

Static burn characteristic may change characteristics

Sample wt

H<sub>2</sub>O paper

Puff by puff sample

pyralis

Rogers WP

no

pH of pulp

1g

5.8

before

2g pulp

75 ml

H<sub>2</sub>O

24 hrs later

pent pH

9.6

sw

4.6

KC papers 2 g paper

titrate

Sourcing method

pyralis

2020286836

Subjectively, w/ charcoal filter attribute  
cleaner, less irritating, less mouth coating,  
still need

Merit 3 mg - 2 POL's this month. Some N6 to  
inclusion in blend

Aftercut w/ improved solubility + better tasting still in  
merit family. BOLD AC plus 38% E.T.  
+ inc Burley spray to keep same level as Marlboro.

LSS Need something to off set dryness + mouth coating

Barban M

web filter. Some difficulty w/ filter RTD  
Semiworks Combined; AFC made composite.

Porosity does not affect tar in UCD

Yachaker Off taste w/ PM Wob  
Howard ~~with the~~

6 mg Workman on blend  
close on 16<sup>th</sup> 6 mg

Any problem  
w/ PC

Red X

Issues - tipping parameter

23 mm length EF  
w/ Lts MC tipping set to 46  
FOCUS grow

2 good smo ; longer on the lights.

2020286837

Locating to cover junction  
Artwork will affect deadlines

2 prices 40% off?  
\$20 / 1000

3 days to make + approve 8/3 - 8/18  
Linda Equipment not limit, w/ Analytics  
inks on artwork 7.7 - 8.0 PC  
TPP is issue not 2.0 TPP

can commercialize 2nd qtr

Production 1st qtr.

2 share brand

C.A - Make the real product 1st.

HOLD OUT FOR LTS + do when materials  
available.

Jim - quantities may change from Ad Pack → Closures.

CA - include drop dead date ~~in~~ in scheduler  
after which can't change.

Melissa - no MONADIC POL's

Seville Discuss how to approach. Discount mentioned  
→

Alpine - need a cork tipping

Melissa

to discuss discount smokes.

100 mm hts + FE

Jim Kool as target - what min hts  
would be indicated.

⊗ Mtg w/ Dick & Jims  
7/13/92 Paper Group

150 vacancies in 92 OB positions not filled.

Operations was almost halfway there

\* 11% COMPOUND GROWTH

DICK  
JONES

Calcium C

RANGE

MARK CRUISE

Across the web variation is real.

All parameters showed the same trend, i.e., there was variation across web - (Front to Back)

.24 after correcting

55% of variation

Range - 1 Coresta across web

Residual

⊗ Samples taken WEDNESDAY to B. Hardy

⊗ Colorimetric

CD	
MD	
OVERALL	10.8 - 13
MEAN	11.97
SD	.53

ALADD  
How is MIP APPLIED  
ACROSS A WEB

2020286839

7/14/92

KS meeting

Equipment problems kept single user  
to new rest

Ernie ) — Machine problems w/ inconsistencies  
Running on only 1 machine

Bakers — made sigs w/ paper — no analysis

7/16

Manufacture

8/3/92 — 4 pellets

8/16/92 — 4 pellets

free to modify order to come from

#14

#14

Smoke & visibility

Status : More conventional

More than 50% reduction

offered results phosphate results  
were lower

2020286840

Supersims Higher sheet into size press  
ramp drying  
flooding both sides of the nip  
should become standard process  
conditions.

Analytical testing round robin  
w/ Mary Ann Staunton

Samples supplied

V1 - 10% MCP

4" wide

V3

078 + 067

Budgetary matter : KC Better  
Correlation with

2. High chalk paper wants to run all  
- Karen - different grades  
C Bart to make correct  
QA - machine X-Ray unit  
1 month in QA

2020286841

Mark Cruise

MKP + porosity variation

Bar

Slitter set is stacked as a column  
Used Random Stacking - pellets  
Bruce

In groups of 25

2 slitter sets + front + back roll

Calcium Carbonate analyzed also

Porosity measurement -

Biggest variation in bobbin

3 or 4 bobbins close to end Coresta lower  
#16 bobbin seemed atypical for all parameters

55% variance

Slitter set

not at steady state

Machines are set up for

Bill

→ Compression outside → inside

Porosity plug wrap This does have

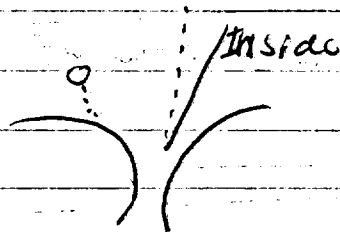
2020286842



Miterage

MKP

all 32 points



Both sides are normally flooded.

Craig Witman →

front to back variation

Higher MKP w/ higher porosity.

Chalk variation

Porosity variation w/ in bobbin.

1" = 25.4 mm    3/4" inch

Steady state condition

Uniformity

2020286843

Superstims - what is a long run,  
10-0624 2 days

Any need for further evaluation.

OK

3. a) Impact of increased Chalk level  
Lower & higher Chalk level 26 to 30%  
.5 mg decrease at higher

Total basis at constant.

runnability \*  
formation \*

cost a test-up

higher cost on porosity.

In another month

4. WOOD PULP PAPERS

a. Pulp Analyser

No you run a cellulose yield  
before

% Cellulose = Glucan -  $\frac{1}{3}$  mannose

2020286844

$\% \text{ Cellulose} = \text{Glucan} - \frac{1}{3} \text{ mannose}$

GENCO

Directed toward baseline understanding of

But to look at different sheet formulation

80% HW

20% SW

same HW + SW source.

33 Coresta sheet

Control

80:20

~~100%~~  
~~80:20~~  
SW: HW

100%

50:50

50% flex 25 HW 25 SW

Wigner & pulp

J. Lyons Hart

Specific Handsheet formulations.

Early August; Cost estimates

Add onto 80-20 add to  
std wood. basis

28% Chalk

27.0 or 27.25

33 Coresta

16% Citrate

2020286845

80:20

HW: SW

~~5 Antistatic Cellulose~~

Ratio is

fairly constant

80% HW

20% Flax

flax SW in past

5. Colloidal Cellulose

⊕ Scheduled to be made this week

⊕ Modifying the method.

Consensus on fabric

Test date

Gravimetric

Wrinkling in issues

Notes: Bobbins of H<sub>2</sub>O based lip release  
size @ 2000 eights/min

Samples made

Coal drop-JR test will also be done

2020286846

Snake cigs 1-5

Communicate

6. Results from next meeting

Get back on machine

Printing on coated sides.

Draw down Tape

Issues  
related to  
printing

Problem w/ Gold band ink.

Try w/ std inks

Hold tip release to one side of the sheet.

Cork on white used to be a problem.

b. Economy base sheet for Cork-on-white

- Art. 1 To use cork-on-white for cork application.

7. Date of next meeting

August 13 . . . 9:00 AM

⊗⊗ KC has a commercial polypropylene filter - Dimension

No time on mfg floor

KC ran some triple filters

Tray of plugs were sent to Ken.

They made plugs + tipped then developed hot melt.

Done indep. of Pm.

2020286847

Confidentiality:

Laboratory evaluation of HPC Avicel

Room until August 2.

4th floor of Education wing

Guarantee a table & wall socket

Bennie Good

August 17<sup>th</sup> John will  
get a room

Refreshments

2 in seminars

Would it not benefit the overall  
patent & proprietary situation to have a  
technical alliance.

~~(Cellulose ~~for~~ ~~the~~ ~~project~~)~~

Joint Venture on Cig Papers & Bands.

Total Partnerships, Economic and technical  
Strategic Partnerships

2020286848

→ June 91

100 %

Experiment

Use a higher quality pulp

7/20/92

FILTER MEETING

Cellulose Derivatives

9 Superabsorbents

- |                                  |                               |   |                              |
|----------------------------------|-------------------------------|---|------------------------------|
| {                                | 1. emc - low subst. - fibrous | } | Alternative<br><u>Fibers</u> |
| 2. Aquasorb                      | Acid / base                   |   |                              |
| 3. Cellulose phosphate           |                               |   |                              |
| 4. Amine subst. Cellulose deriv. | ?                             |   |                              |
| 5. Chitosan                      |                               |   |                              |

SEKICEC

Superabsorbents

(unt)

Aquasorb - fibres or yarn (dry-laid)

Coatings on webs - NH<sub>4</sub> emc, chitosan, etc.

← Miracle fruit - kill sour taste →

Chitin ?

Superabsorbent - patent search

2020286849

## Expectations

Super absorbent

CONCERN - Degree of change

Size - of the

Concerns - limits to empowerment

① need for review

Empowered

Define

Team work & lack of it

X

It won't

Some projects

Teams in name only.

Collaboration between groups.

Risk / Empower

Size - old culture

No limits

2020286850



# Fear Issue

Technicians

Empowerment - authority to m

Communication - { What is the  
goal of our team  
What are the dead line }

⊗ Continuous Improvement

Open What is the vision

⊗ Vision

What is our direction

⊗ Blue Book Review of Planning

⊗ circulate

Blue book

When

New culture in PA

Concern - How to

Open Communication

2020286851

How to create an environment  
for open discussion & dissent.

Concern

Jeff - degree to which mgmt  
takes us seriously.

Issue

Cultural

How committed is management  
to cultural change

Empowerment  
~~framework~~

Bill - No program on New culture.

~~Reputation~~ credibility - Credibility  
Gap

Lip service by mgmt.

Barriers

Communications -

Risk Taking :

Pete : Communications

2020286852

\* Empowerment / Risk Taking  
→ Communication  
Teamwork

## GROUND RULES

1. What we say will be forwarded  
anonymously confidentially.  
Concerns passed forward anonymously

we  
→ Maintain confidentiality within the group  
→ Everyone must participate  
→ Maintain time restrictions

→ Respecting time frame

## Process

Creating the  
LBP - Culture

- ① How committed is mgmt  
to culture change

No backsliding  
preoccupied  
w/ restructuring

Ensure communication.

- ② What are the limits to empowerment.

{ Accountability + Responsibility }

Financial Responsibility

2020286853

## Expectations

### For Empowerment

Empowerment has worked backward.  
It is wise

### Communication:

Get information: ask to be

Clarify & w/in "group" vision

Weekly mktg no

Directives

Planning

Refine our own vision (mission  
→ statement)

→ Refine, empowerment →  
limitations of

communication:

Refine expectations for accountability

Identify what we are doing well

What & what is below expectations.

\* Ask to report

Report: bad news as soon as  
possible

2020286854

Report bad news

→ People Development :

work  
personnel  
personnel

Seminars + continuing education

Training + seminars reinstated  
next year

Decision Making

Q. what are limits to empowerment?

Participate in planning, career paths

Questions w/ in group  
what are limitations on seminars

2020286855

~~Speak~~ Speak  
~~4 Aug~~

~~Run samples~~

~~start Thursday~~

(\*) ① { D 984 (1626) ? inkjet printing of slurries  
1479 ~~1532~~ talk to Drew  
about

② 1570, 1596, 1518

same per on 1393  
Aug. 6

③ 1466 / 1393

Office Action -  
European Application:

45 6.28 302  
5/24/90

Defensive

1st office action Aug 6  
August 6 same

a new 1st office

2020286856

\* Check w/ Ted Krufft abt silicone in WP as FDA issue.  
Cellulose acetate from WOOD

7/21/92 Mtg w/ PED, PD abt LS/LD  
LS/LD research desired.

Planned for this yr as Ambrosia  
Mktg RS. address for Va Slims  
+ the whole concept.

- Define best option VS
- Define potential in general.  
Is it a benefit? inr, LS, LD  
How far do we need to go (all or 50%)

POL - global monadic to make gap.

- \* Sensory Cost and
- \* unaided awareness

Call back to see who noticed.  
What did they notice

V Slims Lts + another mol  
In global panel but not Supplemental  
MLTs.

? ( ? Why cut down on Va Slims research, since that  
is the product ?

Lingering odor.

2020286857

Extended smoking, but not a Pol

large scale qualitative test  
primary concern

FOCUS group

(mental deleted)

Is it worth pursuing further -  
If response is a total yawn  
it would be killed.

Last to go out on the 24<sup>th</sup>  
Denise will tie up panelists.

2nd wk of Sept on GO-NO 60

Penalty for cancelling the focus

Reaction -

Expectation

Lifestyle, Situation ; was it a benefit

Cost / benefit

Rel. importance

MODIFIED AD Pack

Aug 31st

2020286858



CONTROL

7/27

8/3

LSS/10

100 - nonmetallic.

C/150/2978

9% MKP 8.5

Charcoal on Reg

CA/CAW/carbon

combined filter.

31%  $\text{CaCO}_3$

.12 mg/cigt LSS

.2 mg CR2978/conv.

.1 mg/cigt  
150

49 slims, 40+

Reg RS is 13% reduced

9-11 8.5

2020286859

7/22/92 Paper Meeting:

Smoke Technology:

- ⊗ Aging Study - update on RSS; machinability.

Analytical data on Polymers models.

Semiworks models of UMaine magnesite.

Synthetic

Scale up - NY - 2.5 12 reactions.  
Non-sol-gel process.

- ⊗ Analytical data came in

Choice of mfg parameters  
drainage data  
composition

If we are given the goal  
Synthesis:

- ① Meeting on RSS in early August
- ② mfg on Banded Papers

F.

KC, Ecusta, <sup>WBL</sup> Jertakosky

→ some filter flue up

no coal drop off problem

5 TF cork-on-white has high ink not  
when tipping

2020286860

Bill - Jervaski w/ other coating for lipses  
Can they replace clay on Aug 20

Tipping machinery for lacquer shirt on action.

G. Wood Pulp

J. Lyons Hart has samples - Pyrolysis

Visit by Dr. Genevieve Aug 4 - 1971

Statistics - mul - part correction

PDM studies - Begin tomorrow

Bay 1 + Bay 2 - what can be done

mitigation

Log all work on the log

meeting?

Meeting on 8/10 in early afternoon

Meeting on 8/11 in early afternoon

Meeting on 8/12 in early afternoon

Meeting on 8/13 in early afternoon

Meeting on 8/14 in early afternoon

Meeting on 8/15 in early afternoon

Meeting on 8/16 in early afternoon

2020286861

5/7  
\* PACKAGING

6  
Holograms :

wrap may slow drain to price value  
Could be a very cost effective way to drop drain

RTR Research

PET → Polyprop

Jokes consumers are eager for this

Laminated Cellophane

Packaging as an approach to offset drain to price value.

August 4 - Genco + Company

Aug 10-11 SC

Aug 3 - Low Sidestream Brainstorming session

add to that list

LSS

ODOR

Page

Premier - odor - recurring them

sidestream

lingering / stale

reduction in smoke ⇒ reduced taste

35 yr male - visibly smoke

family concerns.

nose eye irritation

★

Report on price

Smoker Segmentation

Quantitative it is each

Report

hard draw  
weak taste  
thinner

2020286862

## Summary

will POL's  
include  
mental

Chelsea - socially  
minded

Horizon is still out Chelsea is not

Size of Cigt was an issue

VSlins Brand Strategies

1991 largest drop

1992 → Rate of decline is slowing  
~6% more stable

1992 → <sup>lost</sup> Convenience store

Reversal in curves in cartons in Supermarket

Va Slins lost young adult female

5% in young group

Last 3 mo B+W + Sub generic

Nilsen dropped every 6 months

Misty is growing

Style Lowland 2 packings

1.1 points → these

B+W 100's

Promoting a lot ~20%

100 mm

Advertising

New Ads

Quantitative Research on Packaging

- it was preferred

2020286863

KS is booklet pack  
only

24.0

Low odor / low smoke 100 mm  
Revolutionary

Might draw some males

Virginia King

~~24.0~~

3rd gr 93

25+ for Low Odor Low Smoke

100 mm product...

Test Market in 92

24.0 100 mm  
Marlboro LTS 85%

no menthol Focus grps

menthol in 100

V8 LTS menthol

Va Slims current product

100's excluded.

Ad Pack is so important...

must have ad & packaging

Perceptual mapping

2020286864

7/24/92 DICK

STAFF MTG

\*

Tues 28<sup>th</sup> 1:00 PM Lecture Hall

Sales presentation B&H KS launch

Request 93-97 Capital Budy.

Mon + Tues - Perfun Mgmt Training

Jim

Next week DICK

3-4:00 PM Structural Changes - Houghton

Diversity Training / Awareness

One of the indicators for PA in diversity

PACKAGING

Strategies for sensory testing; Int. Op. Services

Is this  
an issue  
for you?

GORDON - Being assigned to a team  
where he doesn't fit.

2020286865

Jeannette Lewis in QA  
Her case Fred was  
read him a script.

5/17/57

Discussion w/ ...

Dr. HOUGHTON'S

Interviews done Aug

Develop an ...

6 months from August - they will  
have list

BANE :

Results - Oriented

Culture Change

RJR - 2nd ...

Raised Full margin \$2.50 / 1000 / Dore 67 → 99 / 1000 to compare  
but couponing Volume at Bristol  
... 4th price tier w ...

Required to Retail Masken. Display  
that was an effort to protect ...  
... in defense  
Cigarette Area  
... our own in %

Report Card ...

Visson ... 2193 →

... 2193 →

2020286866



7/27/92

SABET ? Mgmt Performance

⑧ Time tables + meeting, deadlines.

## Communication

⑧ Good to explain expectations  
Good to focus on

1. Identify the competencies

2. { + + Exemplary  
+ ~~well~~ Positive  
C

- - Needs some development  
- - Could signify effect  
on business results.

## Summarization

HD → Productive ... can have some negative  
MD → Gets job done  
UD → Job doesn't get done

2020286867



BI

→ Actions working on projections  
Safety inspection  
Strly planning mty

	STAFF MTC	Budget	In Basket	Overall
C	U M	M	U	MD
MA	M	M	H	<del>MD</del>
OA	—	—	⊖	WD

Call Joyce S.

Lack of OA to make

2020286868

Conversation with Gordon 7/28/92

- ① ~~On~~ Magnesia Status report?  
to write this quarter not yet begun.

Noted that to assure communication  
we need to review

- ② Negotiating Contracts

Stat

2020286869

Conversation with GOR

7/28/92

② Outside Contracts

- twice negotiated contracts w/o clearing with J. Schmidt, a director -

on a sensitive issue. These actions

could have <sup>serious</sup> impact on the business

without discussion with director or Deetman

Weyershauser -

Empowerment also requires

Skam explosion -

Accountable for actions

↓ outcome.

Take more caution - be more prudent

~~① Magazine Report - states~~

? Utilize company resources. Ask for input.

Equation project is the best example

END

③ <sup>LSS</sup>  $\text{CaSO}_4$

- Other patent - Taken any

initiative on this? or other?

Gordon - new initiatives - Blend - less basic

Productivity? - Fieters - different pictures.

Citric acid in Cope - showed movement?

Needs optimization

Ecusta has samples - charcoal w/ flavors absorbed found on / side; charcoal & emc.  $\beta$ -methyl valeric acid released in burning. muc Blend.

2020286870

Meeting w/ V3

Buck's filler : with paper.

Bill Wood pulp - PAPER

\* Handwritten to Navin  
Precision mfg. - June 15 / wait to get minute  
not

Wood pulp plant

Did not plan to design a new paper;  
initial meeting with Dick in June.

2nd round - meeting with Cliff etc -

~~No new pulp suggested.~~

Ratios with softwood / HW - not new; not enough <sup>imagined</sup> ~~new~~ <sup>competition</sup>  
Ignored negative implications from SW page.

No attempt to draw on R&D resources or  
perform a literature search

Informal discussion about plans for  
further evaluation - I told you moving  
backwards - what is this?

Need to show more initiative  
take more responsibility

2020286871

WOOD PULP PAPERS : Get analyticals done.

Requested To make papers in August To do research.  
to extend.

What can you do to accelerate that schedule.

What can you do to accelerating

Bill - Dr

Approximated by 4

discussed pulp analyses -

Higher lignin content for Westwood.

JOHN NUMERO - to look for lignin compounds.

JOHN to start this week.

Pyrolysis of 2 papers - wood + FLAX

Pyrolysis of small quantities.

Higher ~~in~~ wts compounds than J. Lyons-Hert.

phenolic type materials

2 weeks to deter

Dr.

: Bob Evans

To meet w/ Dr. Genco : How <sup>pulp</sup> analyses were done.

Hemicellulose components - lignin & hemicellulose.

→ TGA. Jig to evaluate.

Literature

50:50

80:20

Have we evaluated

Maris cigs made - J. Plam  
Old Ecusta - 2 new Ecusta.

2020286872

Bob  
Even

100% SW ~~max~~ 80% SW

Higher SW

Dr. Genco meeting  $\rightarrow$  Aug. 4

Jim Lyons - Hart

neither HW nor SW

Hardwood pulp - pyrolyzed @

Softwood pulp - 1

Hemicellulose decomp region - is produced  
w/ citrate + carbonate

Alkane-type groups -  $\text{CH}_2$  - EGT

What is the info needed to

FLAX HANDSHEET

80/20

HW/SW

H&S

HW

viscosity w/o additive, +  $\text{CaCO}_3$

SW

few differences

those on which kc

kc

in Oct.

Make cigs to send to Panels make

cigs

workout

2020286873

Need this priority

3 mks till

by Sept. 1st.

Concerns:

Asked about where  
people are coming from -

- ① Bill - That road blocks are being placed there. Not getting <sup>us get</sup> support  
make HW/SW papers  
100% SW [80/20] Control  
100% HW

- ② A level playing field - we communicate honestly. How isn't there a level playing. Bill makes a proposal or recommendation.

- ③ Do not you have a performance. Bill is an excellent grade 13 performer.

Bill:

Dick not being present for meetings

Dick's response to him - Schedule a meeting w/ Tim Dick

0619 D. Radulescu

2020286874



GORDON

Camera

Video camera w/ color image processor

Board - Lectures & patterns

\$25,000

Camera + microscope

Hardware - end upgrade for ambient

\$5,000

Evaluations

DICK: Do we need farms filled out.

Calcium hydroxide feldspar + particulate

ash calcareous; need cement

Agglomerated calcium carbonate

⊗

GORDON REVIEW

LOW SS PRODUCTS MAY

EXTERNAL REQUIREMENT

- REPORT AUG 10 1993

- ETS - bigger factor in future.

No sidestream product required

Melissa -

Myrace

Dick -

Leyden

Op. Plans to Houghton -

Myrace - LSS / 10

Tindall made extreme - ① Cif Sales decreasing rate inc;

2020286875

## New Products

- The patch sales ~ 1 billion  
over counter nic patch - a competitor  
nicotine to cigarettes

New Evec V.P. of R&D at Reynolds is an MS  
at J&J

Pharmaceutical - nicotine inhalers.

B - Biochaper;

Sep. Chaper

Moving Office

~~2002~~

2002 2002 2002 2002

2002 2002 2002 2002 2002 2002 2002 2002

2002 2002 2002 2002 2002 2002 2002 2002

2002 2002 2002 2002 2002 2002 2002 2002

2002 2002 2002 2002 2002 2002 2002 2002

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2020286876

Low SS.

8/3/92

1. Low SS Research

NY Red + NY Proposal

Lingering ideas... POL + call back  
After 4 packs

Addressing - amount of smoke

Concept statement →

Unaided recognition.

Return info on focus group next week.

Just why only tested POL w/ call back  
Large scale st

Alejandro Lopez was here

Models → for evaluation

A Bldg - liked them

⊕ Magnesium paper - Rich punch did what I like them  
Models were made → compare to check.

Blend + flavor

Blend + flavor

Blend & flavor work

⊕

⊕

EC - on Ambrosia II ⇒ > 60% SS Red

2020286877

① ★ Action ①  
Merit

Low Tar High Flavor

Check on

Less ammonia / Bucks blend w/o AC

TEC →

⊗ Trickle citrate is different

2. Action - What are filter needs?  
Filter needs

GORDON + ARLINGTON + HEARN

Aqueous non-salt gel

Can lower

Action i To Scale-up  
and make-up

With

Papers to make

⊗ Memo ;

2020286878

Raise - KC & mg containing materials.

Oct 1st to make papers

Ground Calcium :

Minor

Review Calcium Carbonate

Next week to trip

2 papers + a control

Control MM

Non-sol-gel

Review Patent Status

Review status of all SS

Prioritize

Jeff & Sherry

Asbestos-like

Fibrous

Toxicology - John

Acicular  $\text{CaCO}_3$

Al

2020286879

Spray drying

① Quiz

Many alternative inorganics.

Review Revisit previous

Calendaring as an approach - Navin

Pore size distribution

Review for  
w/ Navin

8/4/92

Dr. GENCO

Dunham-Saunders @ Battell

MAN

Claisen condensation does

End group analysis

sample 100

white fraction isolated

23 has 1 white fraction

100

Kraft pulp - Na Sulfite - 2 Saignier's

found to lignin as episulfide

Caustic cook  $\Rightarrow$  condensation reduction

Flay has for

white - lignin

white - lignin

100

2020286880

⊗ Sulfur free / Anthro

Soda / Anthraquinone / CO<sub>2</sub> cook

Caustic / O<sub>2</sub>

A Sulfur free pulp

\$ 12-15,000

By October 1

Copied of Pulping & Bleaching

Leo Schröder Syracuse

Research Needs for Pulping & Bleaching

Sulfur free

HS<sup>-</sup> episulfides form. Sulfur remains  
w/ Soda / CO<sub>2</sub> Bleaching

2020286881

(\*)

(\*)

$\pm 1.5\%$   
11% mkr

;

9.5 Corasta ;

Gordon

Pick up

1393 / 1466

Turkey

\* Reynolds patent - CaSO<sub>4</sub>

KC - Tru

Tru

3.  
\*

Convert to firm's  
wordmark template

Operational Plans needed  
current plans



Program & Summary to Don Leyden

Timing 12:30 Aug 1st

2020286882



Bill - Wood pulp plan

1. What about papers in August AND October

2. Lign                  Charn

Did you have

1. Production

69%      10-981A

10-981

Matrix to define 23.0 performance

missing analyticals on neutral.

Blend + flavor work - Bucks blend.

Formulating Requests      Bucks in Va Slims

Bucks w/o Ac

Some held up on this - Jim P.

Cigs made but not <sup>upstairs</sup> here yet

Gordon - Handmade cigs on synthetic mac carb.

Aqueous Sol-gel 's + m

non-sol-gel NYP

" " " JP

Smoked

Subjectively

2020286883

12 liter

B2 a. J.P. NY wed 8/12 1:00 PM  
T-4 for 2 hrs.

D. POL models :

CR Have not received them  
Coresta machine smoking to be  
done.

D. Newman -

Pigs made 1st 2nd weeks of July.

~~C. Conference Rm 9:00 AM FRIDAY~~

WOOD PAPERS

Bill - Ecusta wood pulp. 2 Samples.

Pfleuger has models.

Descriptive terminology to be obtained:

Control is Ecusta flax

Thermal analysis - TGA of KC flax + WP

J. Nawajal - GC-MS analysis

J. Lyons-Hart - Pyrolysis of Hand sheet  
w/ & w/o  $\text{CuCl}_2$

To review tomorrow 3:00 PM

2020286884

5/1/18

## TIPPING PAPERS :

1. Coal drop off - machining studies, Donegel?  
Bill to check.

2. Water base lip release

Terwaksky was poorest.

Drainage studies - NY party - mag carbonates  
no significant diff

1. Sal-gel and 3 non gel

## Operational Plans :

Bill Tipping - Hermitite not difficult  
turning low. So inking only w/  
Buff ink - must w/ Hermitite

High speed tipping for Parliament  
38 g uncleaned 23642 tipping  
Closer to what P was with worn  
2 pallets to test at Stockton St.  
5000 at 8000 g. TW

2020286885

8/6/92 Quarta Meeting

Wayne Mc Carthy

Technical Coordinator

1. Cigt. Wrappers for each tobacco Co.

Dr. Joe Newton

WOOD PULP PAPERS

To coordinate all

Coordinating technical efforts

~~to~~

Go into factories

Plug wrap, tipping

+ low SS.

Clemson - PhD synthetic, ext. volatiles

Natl products.

Low SS papers - Tipping, clean-up

synthetic flavors.

28045 dusting problem.

WOOD

Only OR DENSG

ULMA ~~FAULT~~ DETECTORS

500 detectors across the sheet

Lt on photo detectors.

On all cigt making

To pick up dark specks

Pulp spots

Not dirt or black specs

Ulma - 800-line

Flay more dirt - shine

holes equivalents

WC spots we have 20 as many as flay

small spots

dirt larger dens

holes

2020286886

Defects - slitted breakage rate is better  
for WP paper.

More dense spots. Red pop opens

Oily spots visual judge more spots  
in flax papers.

Weak spots :

Specs

Tensile, elongation WP better.

In general run as well as flax paper  
Bleed through of adhesives on porous WP  
papers (50 Coresta)

Refining system - full capability  
refining to put in

Disc refining : making some pros

In place & operable.

Navin → FORMATION TESTING  
OF LINE

On-line monitors

Appearance against  
black background.

2020286887

Confident in the

Built an off-line monitor

Cap. request to build prototype on paper machine.

To combine formation + opacity feeder  
vague mark.

Mark detector on #1 paper machine.

3 months

Monitor vague lines  
can do

Helps to keep mark more uniform

Dark / light back ground; vague line.

Now: Differences in appearance - no dif

Flay papers

More porous

is better

75 Coresta - WP paper

Bill → wood pulp

very much improved: improved soft

Uniformity

27 Coresta

70006478

33 Coresta

06479

Pulps: Hi white SW

Cl<sub>2</sub> bleach

pulp

H<sub>2</sub>O

Encryption

2020286888

$\text{Cl}_2$

Molec

$\text{ClO}_2$

Oxygen

/ enzyme

$\text{O}_2 / \text{O}_3$  delignification  
process.

⊗ Pressure Can do  $\text{ClO}_2$  bleaching

Preliminary results

Printing papers; free free,  $\text{Cl}_2$ -free products  
Flax-like.

$\text{ClO}_2$  bleached pulps are no more expensive  
Ecoute will move in that

Make prototype

Mfg operations in Europe.

$\text{TiO}_2$  mfg issue in Europe.

Sales to Europe in Common Market

2. Calcium Carbonate - anticipation

WRe Capital Budget for 4 ash guage.  
would be approved

Decisions in October on cap. outlay.

3. High chalk paper - 28 g paper

- Materials 28 g paper

30 bobbins shipped  
to do machineability testing.

T0006492 ; Subject

only planning to do Merit  
Ultima

2020286889

Bill James

Plus wrap - ducting glue bleed through  
lots of duct in filler.

Built up w/ time.

Duct probe used; longest samples  
brought filler.

Joe - filler to truck

measured pulp into contribution  
fibrous portion.  
Binder enc

Shaver of fil  
Butter fiber is major contribution

2 types of duct. not at so volume.

How would you address the problem  
of minimizing measured pulp

Measuring formulation  
min measured fiber

Change pig, formulation  
enc + Kylene; (substantive)

Cost of basic solution added at

Pig  
Sequential addition

2020286890



Dilatation rates.

Machine trials varying ratios of conc  
& Keimene - improved fiber.  
complete by next Wednesday.

more conc

for tensile  
Slitter for plug wrap  
spread  
bownd. rotating roll.

Further measurement help bleed thru.  
Pore volume improved furnish  
may pore volume

Perometer 2

Silicone off wick into sheet  
large  
press curve

Navin - to follow up

Solve the problem using the same  
components.

Ref. 28045

Get dusting under  
control first.

2020286891

Coef. friction measurements

Smother surface  
Reduce tension on bar. (on plug meter)

Sidedness & fiber orientation

notes difference.

wire side out left side has more

contact w/ stationary

Coef friction  $\uparrow$  on wire side

vs. feet side.

Rewind could help.

tension increased 5W

Change wire side vs. feet side.  
against tipping.

Rebound a bobbin

740.

NAVO with wood pulp - what other

Pitch control

Alt pitch control agents

INKS - INK NUMBERS & SUPPLIES

Supplier

2020286892

Lack porous combination

Parliament base sheet for month price paper

1. German approved reference - cork tipping  
 $\text{Fe}_2\text{O}_3$  - cork tipping must finish other  
w/ and w/o gold line

② Abrasiveness

③ Massengill

Wayne McCarty - make a slurry w/ chrome  
slide to test abrasiveness of the pigment.

④ German appr.  $\text{Fe}_2\text{O}_3$  oxide Baer does abrasiveness.

30 pellets w/ problem - 44%<sup>6</sup> more abrasive than  
RCT printed truckload qualify run. 24 pellets  
3 set of knives on that truck.

2nd time

Competitors ~~problem~~ <sup>tipping run</sup> with only!

Knife dulling rate Test

Ecusta would reduce pigment level.

tipping abrasiveness

2020286893

Bill - how does this compare to  
slopes of knife tips

30136	.64	} - Knife dulling slopes rate
30033	.50	
30701	.37	

Printing did not contribute to abrasiveness.

Different cutter press for 136 white  
Ran another truckload w/ reduced filler content.

Asked about other sources of  $Fe_2O_3$

not currently qualified. - Ind Source  
→ Colombian

Time is the problem in most sources

30 patent to repeat

Phase I  $Fe_2O_3$  for plain cork. 20 patents

1 free truckload would be OK

Abrasive issues Before next truckload work done  
Phases inventory

2. Mod.

30136 1 pc - Paper ~~converted~~ on

Bx # Del X. WL + M Lts

Ready for testing at Knoxville, Tenn.

On 2 disk testing, wanted more

Adhesive problems - Ajax track adhesives

Plug wrap ~~did not~~ seal well agst.

26 000 plug wrap

Absorbency + get more defects

27

on 136 w/ Finley Pails return paper.

2020286894

Modified tipping should fix this

may get 5 pallets

Bay 2, Bay 1 MC - Cabanas.

Navin - made tipping more absorbent refining <sup>sign</sup> filler content.

3. Economy - white - Ti free white tipping  
M Lts 100% - Order a splitter set  
to check

T&O - coal drop off; filter flange up.

Printed by Hermatite Buena Vista.

Econ. ~~book~~ -  $TiO_2$  to get it out of  
36 g all chalk sheet 85.5 opacity.  
Abs. 30436 w/ lower porosity  
& no coal drop-off

Evaluate this.

2000 m. bobbin

Smoothness & contact L for lip release

coef of friction

absorbance

# 11 machine OT

Should machine rest well for  
generics

Tipping

Economy cork - white base sheet 2 layers

some cost savings - European customer

problem w/ cork on white. Dropped porosity

4g

2020286895

White shirt - panel  
32 g all dark shirt.  
Economy - cock inks

4. Latex coated tippings  
comp to Mats picks plan up + coal  
drop-off. Getting smoke

Gives some tip rls. properties

Much homework to do

Higher machine speeds

Plug pass w/ latex

No w/ printing

1- 1 1/2 yrs

No incentive to switch

5. Base sheet for H2O based inks

work w/ ink suppliers; H2O based ink.

Ecotex Pilot printing. Will work on that

Approved list at

Eric - 033 run

After ink work done - will work on that

2020286896

8/7/92

Review cap. budget

Op. budgets due Aug

+ 2nd revised stick w/ this

Play on  
Farm - by Aug 31.

93 by August 21st.

Template on wordmark.

United way Aug 5. Complete by Aug 19

No Sam will be in Asia.

Fiduciary training : call

Dave Davies w/ legal Players in Canada.

Vantage w/ <sup>the</sup> wrap came in yesterday

Doral - new fresh packaging

120 mr

23.0

Merit Ultima

Merit Ultima mental.

Make-pack for Marlboro Std.

comment

Filter harder to natural vs synthetic traction

ink. 8/7/92

QA method for

Tables

Dif. between

Colorimetric value Std. analyze a

group of pallets

1/2

A bias of a little less than.

2020286897

# Agreement

Parking

Hillman Lip-Mulca

8/1/92

Number - 4000

CA 2978

LS

Melina

⑧ Operational Class

Sm

Aroma Modifica

Smoke Technology :

B - what assist in design

" " "

Tormentors

Smoke

Sidapharm →

→ Nicotine Phosphate / Blend Component

It = Nicotine

Sidapharm - Aroma - odor + irritation

→ irritation measure

Capture

Control 8 post + 1 post cost

No functioning chamber essential sig

→ Good Band .515th under submarine

small cost within a to cost to

2020286898



8/7/92 NAVIN'S meeting w/ filter group

Fibrids — Particle

Zeolites + Carbon fiber

Fibrids → If we →

CA web w/

Prot fibers

Tenax

Sheet strength

PM web w/ Cotton / Fibrids

Action: Handsheet — w/ Fibrids + get surface area

★ ★ Handshuts on Cotton + Eucalyptus

August :

Sept → October

Fibrids

Gowenew

2020286899

1 Model - existing 11% MKP + mixture M-70, 23% MK

3 KC/6 MKP 4 models

3 KS/6 MKP or Albacore, Micron 3, M-70, 25

7.5 KS 4 models - Analytical Info

100% MKP 2 Models

MM mixture

14 models

14 models

2 P + Action - Sherry to Yatriakis to Chick  
Yatriakis - Jeff + Sherry to Felt to George

Operational Plans

2 runs for  $\text{CaCO}_3$  at KC 25 copies  
3 - what? to?

1st 3

1 ton

1 ton

6 tons paper

2020286900

★ ★ Talk to Melissa abt including ★ ★

① Operational Plans + Budget  
Reduced SS

Scale  $\text{CaCO}_3$

→ 2 mil runs - KC early in 8th

\* Product need → 70% reduced  
inc PC

Address issue w/ Ted

Magnesium

① Magnesite: machine made synth. Magnesite  
evaluate

∴ 1 additional paper at Maine.

Continue Ag Non Sol-gel 2 mil runs

4th gr

Finish Solns Main 4th gr

Sizing agt 10th gr-93

4th gr for Placer to make a ton  
large initiate commercial  
inquiries

4

Obtain Contracts 10th gr

Pending results initiate 2nd.

2020286901

Aqueous "Sol-gel"

Final ver 92'  
validate 3rd qtr 92

Select Vendor lot 93

2nd qtr 93

3rd qtr 93 U Maine

4th qtr Complete Evaluation

costs

CR 2978

3rd qtr

Review Technician

New ~~3rd~~ qtr 92 Re

New CaSO<sub>4</sub>

evaluation Make filler

Handsheets for selected

+ evaluate results on handmills

cost

2020286902

Assess experimental result  
selects candidates for further  
scale-up.

2nd get cigs made  
3rd gtr evaluate

Accular

Test Market 2nd gtr 93

Coat :

4th gtr 92

29

2000 lb

.1 % - .2%

1% + 2%

X  
50 lb in

2020286903

# KC Meetings

8/23/92

Bleed  
Yurongyi

Wood pulp in Open seams

a) Adhesives High Corecta

Cabarrus - defects J-Row

Preliminary inquiries ask:

Bruce Steidel

Wrinkled rod at Cabarrus R

b) mil

Dis-Kun

Eucalyptus

Similar analyses

1000 lbs of 100% Hardwood sheet

100% HW

1000 lbs of 100% Softwood sheet

33 Corecta sheet sheet X

80-20

HW/SW

90/10

Timber

90/10

Furnish changeover

90/10

100% HW / SW

Check additional mixture

2020286904

Regular papers

6,000 - 8,000 lb of paper  
1,000

~~100~~ 100 bobbins

100% Klv

100 / 80

600 - 800

33

0.6% citrate

28% chalc

Next week

2. Tipping Paper

Lip release; David's 2000 cifs/min  
control: mts 236mz; 2 trials; difference between  
trials. Good gluability was focus. Printing studies needed.

b. Economy base sheet for cork-on-white tipping.  
- op services <sup>- some printing</sup>; 2 pallets of tipping ordered  
by purchasing.

3. Superslims Wrapper

11.7% Colorimetric

10.0 Coresta

KC Sheet

9.

10.0 average

vis 71-72%  
target

2020286905

Carol Jones on extra 8

Production

To monitor 2.7 range

Range at target

28 - 34%

.5 mg tar change  
EC chalk has

MKP

SS red

tar .5 mg range

.06

EC range

Coresta

.04 EC

.4

News on  
VS LSS

.05 for matched porosity  
2 weeks of production left.

MKP 002 VI

3.9 Coresta

5.2

~~the High Chalk Paper~~

Grade 047

8 Coresta

Lower basis wt has been used up

4. High Chalk Study

X-RF method is complete + is ready  
for transfer

5. MC

10-705 trials

Prog 1 mo will run for 1 mc  
about 1 mo.

2020286906



Accelerated audits. Will compare to  
previous run.  $1\frac{1}{2}$  wks; Aug 3;  
Production mgmt. was keeping an  
QA will sample will test

Cigs made in July

6. Banded papers

- ① Moist sheet - to apply sheet about 20%
- ② Alcohol + Advice
- ③ Felts to prevent cross machine shrinkage

Lab studies on adhesives + quality  
im.

Formations testing  
Porosity

Image Analysis for band width + spacing

Navin - Analytical method for  
propyl paraben - uniformity

Latest ; propyl paraben analyses.

2020286907

Yard

Processing and 50% wetter sheet.

Art

Aviced 2 Cartons

Effectiveness

What are the problems

Build on design -

winding

Viscosity of Cell depth need to be

matched.

Reduced cell depth 5 dig depths.

20% sheet moisture

Application method

2020286908

Analytic : Basis wt  
tonage analysis for uniformity of bands  
width

What next steps

Mark Cruise  
on date

9" Full diameter bottles  
Specify material +  
application detail  
→ High moisture trial

\* Ask about Machinability + KC presence +  
fracture

Glueability in bands ;

2020286309

Jim Staff Mtg.

8/14/92 ① Asset disposal We will not write any off assets.

Tagged

Keep looking

② Jan. Al box - Out Res on Al box.

Handmade boxes. no plastic pack (previously best pack)

2 wraps APR Box

Rounded Corner

Advantages - Receptacles, fresh; with it.

Downside - not too heavy or sturdy

③ Martin Terry - new person in PED

~~At~~ ~~out~~ PMPS. Also to help w/

④ Planning - Restructuring of Major Programs.

1992 - Dom Prod Dev + Support

Prod Sup PROD

1993 - Dom PROD DEV : EXISTING PROD SUPPORT

PROD DEV

PRODUCT TECHNOLOGY

WHAT

PROJECTS - FLAVOR TECHNOLOGY

PRGMS - CONSUMER RESEARCH TECHNOLOGY

WHAT

RESOURCES

PAPER

Dev of novel papers

papermaking materials

FILTER

PACKAGING TECHNOLOGY

2 NEW PRGMS BEING ESTABLISHED

TOBACCO TECHNOLOGY

SMOKE TECHNOLOGY

2020286910

PROJECTS

Dates for Operational Plan

CO catalyst work

Timing- Operational Plans August  
Milestones of Program + action plan

Each Project

Support Activities - Plan for this  
Document NET not action

settling

NPD is a Program; for safety evaluation

CASI LEAF

NET

PROD TOMORROW

MAN HOURS AND PEOPLE ASSIGNED AS WRITTEN UP

BACKLOG

A-1 1130 Prod Dev Today  
→ 4130

CALL BACK HAS STARTED for LS/LO

LOW VISIBLE

ALL 6 condition

back to front  
about question

about reduced work

They will ask this question on the  
second call-back.

2020286911

8/17/92 Paper Jan Mtz

Barbus to do  
positivity follow  
up on wrapper.

5-7 non with differences  
across the web.

Navin - calendaring

A - note team work benefit.

Cookies for tm

October follow up

COMMUNICATION

8/19/92 DICK STAFF MTG

- SECURITY

① KSH - SECURITY - Seminars marked & marked

SECURITY - OFFICES - locked up.

PATROL OFFICERS ON DAY SHIFT -

EVENING

DICK WILL DO A SECURITY CHECK ONG

\* MONDAY - GAP MTG - Studying looking

② EMPLOYEE SEVERANCES - Retirement etc.

Judy Ryder to leave after getting contract.

③ Add Langolotti - to get Project Tomorrow

OFFICE DISTRICT calling & banded

Performance Mgmt

8+9 to

Tim to reconvene the group  
to get interpretation of constancies.

2020286912

Spread sheet with competencies.

~~Let~~ R+D may do that for ladder positions. Lilly to head it up for 11 & below have not been dealt with.  
Work w/ Cliff - Sherry from this directorate.

OB for 93 RF 2RF  
Headcount on budget.

PA distribution

As Dec approaches SRN in March

PA re 55 / 4's 35 / 3's

Evening Seminars will continue →

S  
CONTINUOUS IMPROVEMENT for R+D

TRQM  
Seminars expenses for continuous im  
20,000 for 40 people they become trainers.  
Intact work group

New Product Plan - 3/4 per carton off

20 lamb - MUC - 20 Marlboro - 20 Marlboro - 20 Marlboro

30 Marlboro - wide - 20 Marlboro - KS

24.8 RC pack 20's + 10's in Reg to

Circumf 23, 24.0

Booklet pack 94

WIDES & red express

2020286913

# PaperTech Mtg

8/19/92 Reduced SS

## A. Superlins wrapper

1. - G. Balenowski - specs.

Production Superlins ~ 70-71 %

2. viscosity testing  
52%

KS -

3. Results coming back
4. Models in semiworks ready to be made
5. Handmade cigt results
6. Lower closest to core

## B. Experimental low SS papers.

1. Rhombohedral calcium carbonate

- Mtg 14 different

Multiplex

Albaen  
all papers but  
are available

2. Calendaring -

Option increase SS reduction  
amount of

$\Delta 11 \rightarrow 6$  Coresta 75  $\rightarrow$  4 or 5

get 23.0

24.0 + 24.8

Outside loc

for calendaring

## Mag Carbonate

SB 6.8, 7.0

Baymag vs Synthetic magnesite : 51 + 53 %  
no difference between them subjectively.

Aqueous non-gel gel - new apls.

2020286914



How is 50 lb production coming along.

Everything under

Aug 31 to start

Early Oct

Agua sel-gel - model scale up

Girdleman Asoma Modi

Aquilon - sample - class of material

Phase clearance for vanilla

→

memo to ~~start~~ start on pyrolysis

work is done.

Project Tomorrow

→ need data from Newman + Rogers.

Steam exploded fibers.

moving - scale-up in progress.

B. Calcium free - Sugar free Pulp.

{ Kraft pulp

Soda pulp (CDDr

Soda Oxygen /

Pulpine

5 lb each

NaOH

Hand wood chips

H. Specs

- All samples taken; runs.

no machinability problems.

Makes; not

To complete

after

2020286915

4.

For several machines  
increase in paper breaks + open season  
compared to Exakta

8/24/92 Jim ~~in~~ Jim, Ly, Arlington,  
STAFF mtg

What Date does Jim want Op Plans  
Jim Sharon to work for COX Primary Processing  
ICI night study group  
Professional Soc. memb.  
as of Oct 1 will not pay

Security - grow Dick meeting

Routing info

Budget - back

Budget ~~and~~ Mark ~~to~~ midwest

★ List of ~~offspring~~ offspring w/ decent to semiwork

Budgeting to change back for  
development costs \$ 144,000 per yr.

Continuous Improvement to

Total Quality Mgmt

training

My working Jim over

2020286916

3 weeks ~ 7

TQM for all

Harry Lanzaletti → DICK : Responsible  
for Project Tomorrow . LLP Presentation

Issues - vendors + security

Circumference Research

Menthol on paper from the flavor  
dispenser

IS Restructuring

Tom Petit Bone IS VP

Jerry Ikardi

Free Market vs Centralized

Houghton

Consumer Research → Prod Dev  
Support to Int'l.

Being measured agst what we can't affect

Sept 21-23

Review where BASE is .

1st Concrete figures on structure .

Petrella, Duxon  
etc.

Issues ; Decision making process

Teamwork

Richmond Tobacco Co

Oct 21, 22

Nov 11-12-13

2020286917

Dick STAFF n76

All assets in the group. Sign for the assets.

⊗ Check on document security tomorrow

Budgetary constraint

Dick to review Boughton's meeting.

10 min on safety

Marlboro - Shift in liking scores  
— down.

9:00 AM - Houghton to review

[illegible]

1933

21-5-1962 29 September

2322223  
32223  
13222

5 + 5 = 10

[illegible]

6-15-82

Deftone

...entgegen der Erwartung...

... ..

1900-1901

1875

247

— 15 —

**2020286918**

Permanent  
Permit  
Material Pass for cigs from Semiworks

Assets, info & materials

---

8/27/92 Staff Mtg.

Low SS / Lo - models are out  
Jan + Melissa out next 2 wks

Dick - Op Plans: Improve process

Need to prioritize work:

Op. plans - 93 commitments

Justification for opening?

2020286919

9/2/92 Paper Jack Meeting

Last 2 shipments were

New std. procedures - install. - R&D Karen has

run ↓

Sept. Oct. 1200 bottles

two old orders - 1200 bottles

LSS VS - Consumer test

1 run on visibility

pH studies in progress too : acid treatment  
modeling

Phorb

Coated. Recombined for perforation.

Analytical

Additional

Sampling of water phase

May - 10 lbs made !! 2 - twelve

Aqueous

Memo on ;

MBR

Backs

E. Tipping

Machining trials received well

2020286920

WOOD PULP AIEI 9:00 AM

1. Jim Descriptive aspects

Na/anthrac 5 lbs  
Na/O<sub>2</sub> 5 lbs

Cl<sub>2</sub> + S free  
ClO<sub>2</sub>

Bier Recht

9/3 Jim STAFF MTG

Bonnie O'Brien <sup>Requisition</sup>

Names of people taking class during the day

Sept 17 Richmond mtg - kept KC mtg  
Al pack

Signed deals w/ machine shops

Sept 10 Rx + wids

Norma Suter - new merit brand mgs from PUG

22nd MTG 100

Reiter here next Thurs

Sept 18 Budget review w/ K.H. STT

Sept 9 Capital Budget

Mag Carbonate Patent by Ecusta

ET separate + determine

2020286921

70 1:1

$\frac{1}{10}$   $\frac{1}{5}$  JAN'S - Products

18/10 very interested some not  
didn't perceive

Attitude + life style made a diff.

Any change

Reduced vis issues than aroma.

Ask too firm; turn into a benefit

Most said it's so similar to  
my own brand.

Even w/ Mts

Open ended ;

Can't detect any ~~vis~~ differences w/

~~paper~~

IR transmission spec. on paper

day XL

alt 3° shape is different

JTI

John Navaret sees no  
differences, although Japanese

Molecular Structure Determination

Thermal Chromatography

2020286922



Fingerprinting ~~lignin~~  
lignin

Hardwood in digesting - HW

① Confirmation of the  $m/z$  60 peak  
as acetic acid as glycolaldehyde

② Thermal Chromatography on the <sup>100%</sup> SW / <sup>100%</sup> HW - ~~2000~~

③ KC Flax 50/50 vs 80/20  
Ecusta wood control no.

Barbero panel to do this

④ Try S+H ~~and for~~ for subjective.

Tc/ms

2020286923

5.8% - all extinguished - ci-611  
MOD III 6.0% MBR - Red by 8mg/min  
mod 8% 6.3% 3/4 est. ~ 10 mg/min reduction  
level enc  
MOD IV 6.4% Reduced by 5mg/min 42% solids

9% Application level

Reduce MBR by  $15 \text{ mg}^{20}/\text{min}$

Avicel loading vs MBR rate  
→ 15mg

Marlboro

DON TRAINER → small paper

JOHN HEARN

→ small

Bill Uniformity of permeability

B

March 31

test date

Aug 94

BJ series - description

2020286924

6% wt  
applicat

AuF

<sup>the</sup>  
- what samples are

micro uniformity

↔ Contact → D. McRae - about  
optical

Microdensitometer - optical

→ Two reel double bobbins

<sup>uni</sup>  
Avicel CL-611 - 6%

3.5% - }

Entire sheet 1 set at

CL-611 - 4% two bobbins

Double bobbins

⊗

Make w/o

25 mg/min in a cist  
35 or less.

2020286925

9:00 Am DE 1

Police band Process Review Why

9/192 Tindall's memo on

Section leader - accounted for in administration

Final deadline of the 18th for department's report.

Any

Sept 17 - 9 p.m.

Va Shino 10/1/55

non merited available

8:30 AM MONDAY

Review on LSS POC

JAN - Qualitative

Finishing questionnaire as in LA, Product  
is perform well. high visual & other effect

? ← (brown notes) - very close to own  
hand.

high style & behavior affects evaluation

202020286926

⊗

Extend KC

Call Jack

broadened range - some times the  
would be

joint development agreement w/ exclusivity  
agreement.

⊗

Reiter + Cliff to talk about key  
technical issues in a global sense.

⊗

Jack w/ Cliff on a regular basis

MICP - Check w/ Jim Schardt  
on other parts

Basis w/ variation →

Poor ability to target the filter mass

RTD is off

now - plans for PM webs

Another

Basis w/ variation

Can they control  
it any better on a flat  
wire machine?

2020286927